

TOP SECRET RUFF

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13 January 1969

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TIDAL POWER PLANT UNDER CONSTRUCTION
MURMANSK AREA, USSR
69-22N 033-05E

1. SIGNIFICANCE:

KISLAYA GUBA TIDAL POWER PLANT IS A FULL-SCALE EXPERIMENTAL INSTALLATION UTILIZING TIDAL ACTION TO GENERATE POWER. THIS IS THE FIRST IDENTIFICATION OF A TIDAL POWER PLANT IN THE USSR.

2. LOCATION:

APPROXIMATELY 25 NAUTICAL MILES NORTH OF MURMANSK AT A NARROW INLET ON THE KISLAYA GULF.

3. REMARKS:

CONSTRUCTION REPORTEDLY BEGAN IN 1963. THIS PLANT IS TO SERVE AS A PROTOTYPE FOR STUDIES OF LARGER PLANTS. IT WAS DESIGNED AND DEVELOPED IN COOPERATION WITH THE FRENCH WHO HAVE BUILT TIDAL POWER PLANTS OF THEIR OWN. PREFABRICATION OF THE TURBINE-GENERATOR BUILDING WAS OBSERVED NEAR MURMANSK ON 22 APRIL 1968. COLLATERAL PHOTOGRAPHY OF JULY 1968 REVEALS THAT THE TURBINE-GENERATOR BUILDING WAS READY AT THAT TIME TO BE FLOATED FROM ITS CONSTRUCTION SITE TO THE POWER STATION

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SITE. THIS TURBINE-GENERATOR BUILDING CONTAINS FRENCH-BUILT TURBINE GENERATORS WHICH ARE DESIGNED TO OPERATE BY WATER FLOW FROM EITHER OF OPPOSITE DIRECTIONS, UTILIZING BOTH EBB AND FLOW OF TIDE. THE CAPACITY OF THE TWO TURBINE GENERATORS IS REPORTED TO BE 800 KW, OR A PRODUCTION CAPABILITY OF ABOUT 2 MILLION KWH/YEAR. THE TIDAL RANGE AT KISLAYA BAY AVERAGES [REDACTED]

4. PHOTOGRAPHIC CHRONOLOGY: KISLAYA GUBA INLET IS OBSERVED ON PHOTOGRAPHY OF

[REDACTED] THE ONLY ACTIVITY PRESENT

AT THAT TIME IS AN OBJECT THAT APPEARS TO BE A SMALL FOOTBRIDGE SPANNING THE INLET AT THE POWER PLANT SITE. THE FIRST EVIDENCE OF CONSTRUCTION AT THE SITE AND THE PRESENCE OF A POSSIBLE DAM BLOCKING THE INLET IS FIRST OBSERVED ON PHOTOGRAPHY OF [REDACTED] PHOTOGRAPHY OF

[REDACTED] DEFINITELY REVEALS A DAM

ACROSS THE INLET AND TWO BUILDINGS COMPLETE AT THE SITE. THE FIRST LARGE-SCALE PHOTOGRAPHY OF THE

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SITE IN [REDACTED] IS HAZY, PRECLUDING
EFFECTIVE INTERPRETATION. THREE BUILDINGS AND
EXTENSIVE GROUND SCARRING IN THE AREA ARE VISIBLE
ON PHOTOGRAPHY OF [REDACTED] THE
LATEST COVERAGE OF THE AREA IS OF [REDACTED]
[REDACTED] AT WHICH TIME VERY ACTIVE CONSTRUCTION
ACTIVITY IS APPARENT AND A POSSIBLE BARGE IS
OBSERVED IN THE INLET JUST BELOW THE DAM SITE.
SINCE JUNE 1967, PHOTOGRAPHY OF THE KISLAYA GUBA
AREA HAS BEEN CLOUD COVERED.

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CONSTRUCTION AT THE MURMANSK TURBINE-GENERATOR
BUILDING SITE STARTED SOMETIME BETWEEN [REDACTED]

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[REDACTED] WHEN THE

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FIRST GROUND SCARRING AND A SMALL BASIN WERE
OBSERVED. CONTINUING CONSTRUCTION WAS EVIDENT

[REDACTED] WITH THE ADDITION OF AT

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LEAST FIVE SUPPORT BUILDINGS IMMEDIATELY SOUTH
OF THE BASIN. CONSTRUCTION WITHIN THE BASIN WAS
APPARENT FOR THE FIRST TIME IN [REDACTED]

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AND APPROXIMATELY 10 BUILDINGS WERE VISIBLE IN

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THE SUPPORT AREA. THE FIRST IDENTIFICATION OF
THE TURBINE-GENERATOR BUILDING CAN BE MADE IN

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ON THE FIRST LARGE-SCALE

COVERAGE OF THE SITE. THE LATEST COVERAGE OF

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THE SITE, REVEALS THAT THE

TURBINE-GENERATOR BUILDING IS STILL UNDER CONSTRUC-
TION. IN ADDITION, A CONCRETE BATCH PLANT CAN

BE IDENTIFIED IN THE SUPPORT AREA.

MISSION REFERENCE:

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ENLARGEMENT FACTORS:

MURMANSK AREA 2X

INSET 30X

POWER STATION 30X

IEG/WGD

Y

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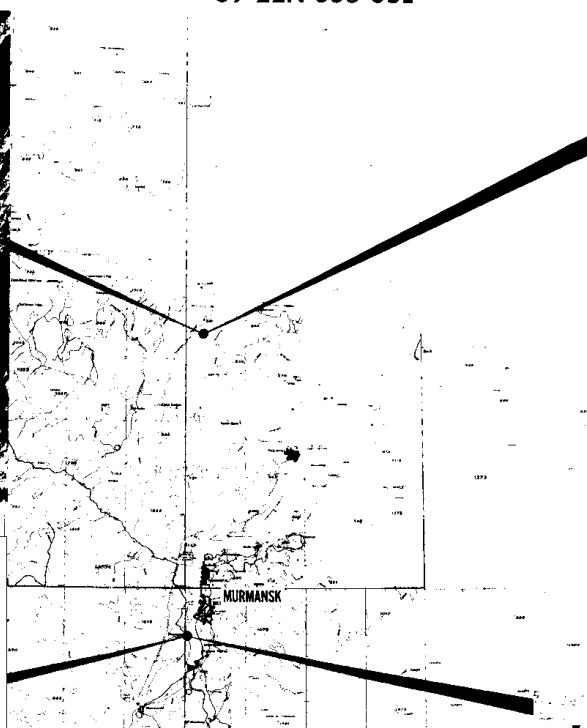
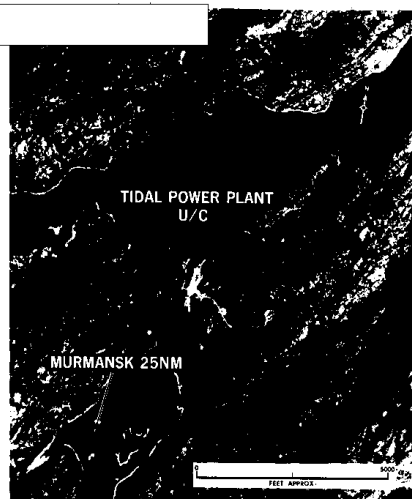
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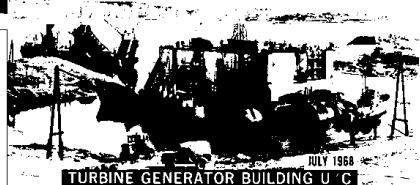
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PRIRODA NO 3, 1968



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